

Today's Topics:

ARRL PFB 48
ARRL Propagation Forecast Bn Nr 49
Mac vs IBM
PSK Modem for sale
Receive antennas.
Wall Street...cordless...; now cellular encryption

Date: 12 Dec 89 19:15:04 GMT

From: hpfcso!hpfc dj!myers@hplabs.hp.com (Bob Myers)

Subject: ARRL PFB 48

Message-ID: <18230011@hpfc dj.HP.COM>

>Have you ever noticed that when you look straight down into a pool of water
>you can see the bottom, but when you crouch down and look nearly parallel
>to the water surface, it looks like a mirror? The ionosphere acts the same
>way to radio waves -- signals that propagate straight up go right on through
>into outer space, while signals radiated at a lower angle can be reflected.

>

>If you think about it, closer stations require a higher radiation angle.
>Theoretically, to work someone a block away via the ionosphere, you have
>to transmit almost straight up. Actually ground wave (non-ionosphere)
>works for very short distances (tens of miles), but distances from, say,
>100 to perhaps 1000 or 2000 miles are in the skip zone.

>

>On lower frequencies, the ionosphere is a better reflector so the skip
>zone is smaller or non-existent.

Well, not exactly. The ionosphere doesn't really "reflect" radio waves; more properly, it "refracts" them - bending them back to Earth. The difference is subtle, and the action of the ionosphere may often be modelled by imagining it to be a perfect reflector at a specific altitude, but that isn't what really happens.

The other effect of the ionosphere that comes into play in considering how signals propagate is absorption. Higher-frequency signals are both refracted and absorbed less by the ionosphere, and are more likely, therefore, to make it through before being returned to the surface. Low-frequency signals are both absorbed and refracted more - they're easy to get "bounced back", but are more likely to be absorbed into the noise before you can get enough signal back to do any good. Due to these *two* effects, there is only a certain range of frequencies which are suitable for communication over a given path at a given time of day (plus other conditions affecting the strength/height of the various ionospheric layers). Above this range,

the signals punch right through before they get back to the surface; below it, the signals are swallowed up in the noise. (Think - if it were just a matter of "reflection", you'd get AM broadcast band stations all over the country in mid-afternoon!)

Bob Myers KC0EW HP Graphics Tech. Div. | Opinions expressed here are not
Ft. Collins, Colorado | those of my employer or any other
myers%hpfcla@hplabs.hp.com | sentient life-form on this planet.

Date: 13 Dec 89 20:01:40 GMT
From: victim.dec.com!reisert@decwrl.dec.com (Jim -- LTN1-2/H03 -- DTN 226-6905
13-Dec-1989 1457)
Subject: ARRL Propagation Forecast Bn Nr 49
Message-ID: <8912132001.AA02252@decwrl.dec.com>

In article <788@larry.sal.wisc.edu>, sde@larry.sal.wisc.edu (Scott Ellington) writes...

>Does anyone out there understand the wierd propagation we've had on 20
>Meters at night for the last week or so? The polar path is open, even
>though there's no sunlight there, but the Pacific path is dead. At the
>same time, the dark path to ZS6 is wide open.

What time are you referring to? I had no trouble working 3D2XR last night at 0450Z. Also heard a couple of VK's.

We've been having some solar disturbances lately (witness the poor openings on 15 lately to Asiatic Russia). Maybe that accounts for some of it.

jim, AD1C

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"The opinions expressed here in no way represent the views of Digital Equipment Corporation."

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Date: 14 Dec 89 06:55:23 GMT

From: winter@apple.com (Patty Winter)
Subject: Mac vs IBM
Message-ID: <37255@apple.Apple.COM>

In article <1862@tellab5.TELLABS.COM> chrz@tellab5.TELLABS.COM (Peter Chrzanowski) writes:

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>
> IMHO there are more fanatics in the MAC camp than in the
> PC camp, for some reason
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Gee, Peter, the reason seems pretty obvious to those of us who've tried both machines. :-) As a friend of mine (who teaches both PC and Macintosh computer classes) puts it: "People tolerate their PCs, but they love their Macintoshes!"

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> For me, the bottom line counts: PCs are cheaper and, for most tasks,
> the PC is adequate (a lot of application software runs about the same
> on either machine). That is, some of us would just as soon use a Chevy
> (Hyundai?) as a Porsche: the Porsche is more fun to drive but either
> vehicle will get you to work, and who wants to pay $40K+ for a car?
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Yes, I think the financial reason is certainly the deciding factor for (most?) people.

Anyway, that's a never-ending religious issue, so to digress back to ham radio :-\

I just mailed out the last of this year's F00FB cards, so if any of you are waiting for them, stay close to your mailboxes. Please note that I am **not** the regular QSL manager; Ross typically does his own cards. I was just helping out because he and his family have been so busy dealing with putting their house back together after the quake.

73,
Patty

(who now owns a Porsche as well as a Macintosh. Guess I believe the journey is the reward both on my desk and on the road. :-) :-))

— —

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*****  
Patty Winter N6BIS                                INTERNET: winter@apple.com  
AMPR.ORG: [44.4.0.44]                            UUCP: {decwrl,nsc,sun}!apple!winter  
*****
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Date: 14 Dec 89 03:21:00 GMT
From: quanta.eng.ohio-state.edu!phonon.eng.ohio-state.edu!rlong@tut.cis.ohio-

state.edu (Prof. Ronald Long)
Subject: PSK Modem for sale
Message-ID: <3751@quanta.eng.ohio-state.edu>

I know this is not the swap net but ...
since there have been postings recently about psk modems ...

I have for sale a TAPR PSK modem kit . It is still in the box.

Send email if interested or call 614-486-5746. Thanks.

Ron W8GUS.

-=-

Ronald K. Long, Ph.D.
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Date: Thu, 14 Dec 89 10:22:19 GMT
From: "Pete Lucas, NERC-TLC, Swindon U.K." <PJML@
Subject: Receive antennas.
Message-ID: <14 Dec 89 10:23:10 GMT #1361@UK.AC.NWL.IA>

One thing to remember about receive antennas is that in most cases, absolute signal-gathering ability can be traded off against QRM elimination. Certainly on the HF bands, any discrimination between the wanted signal and QRM is worthwhile. If you can do anything with the antenna that reduces QRM by, say, 20dB but, at the same time reduces the wanted signal by less than 20dB, then readability will improve. I have used a small loop on 80 and 160 meters for receive - great for nulling out the various radio nasties with which we share our bands. Many years ago, the ARRL handbook had a reference to a system whereby you used two antennas, one that received the intended signal, and another that received the highest level of QRM possible. A network of variable capacitors allowed out-of-phase QRM to be added in controlled ways to 'null out' the QRM. I have never tried it myself, but know that the same technique is used in some military applications.

++Pete

Date: 13 Dec 89 22:47:17 GMT
From: cs.utexas.edu!asuvax!anasaz!john@tut.cis.ohio-state.edu (John Moore)
Subject: Wall Street...cordless...; now cellular encryption
Message-ID: <1038@anasaz.UUCP>

In article <8912112022.AA01350@ti.com> dube@cpdvax.csc.ti.com (DUBE TODD) writes:
]The notion of encryption of public communications is an oxymoron. In order
]for encryption to afford security, the method must be known only to a few
]who have a need to know; then it should be changed at irregular intervals.

This is pure nonsense. Modern crypto techniques require only that the
key be private. A "public key" system even allows you to send messages
to someone else who publishes his key, and yet only he can read it.
Please read a book on modern crypto-systems, then eat your posting.

--

John Moore (NJ7E) mcdphx!anasaz!john asuvax!anasaz!john
(602) 861-7607 (day or eve) long palladium, short petroleum
7525 Clearwater Pkwy, Scottsdale, AZ 85253
The 2nd amendment is about military weapons, NOT JUST hunting weapons!

End of INFO-HAMS Digest V89 Issue #1015
